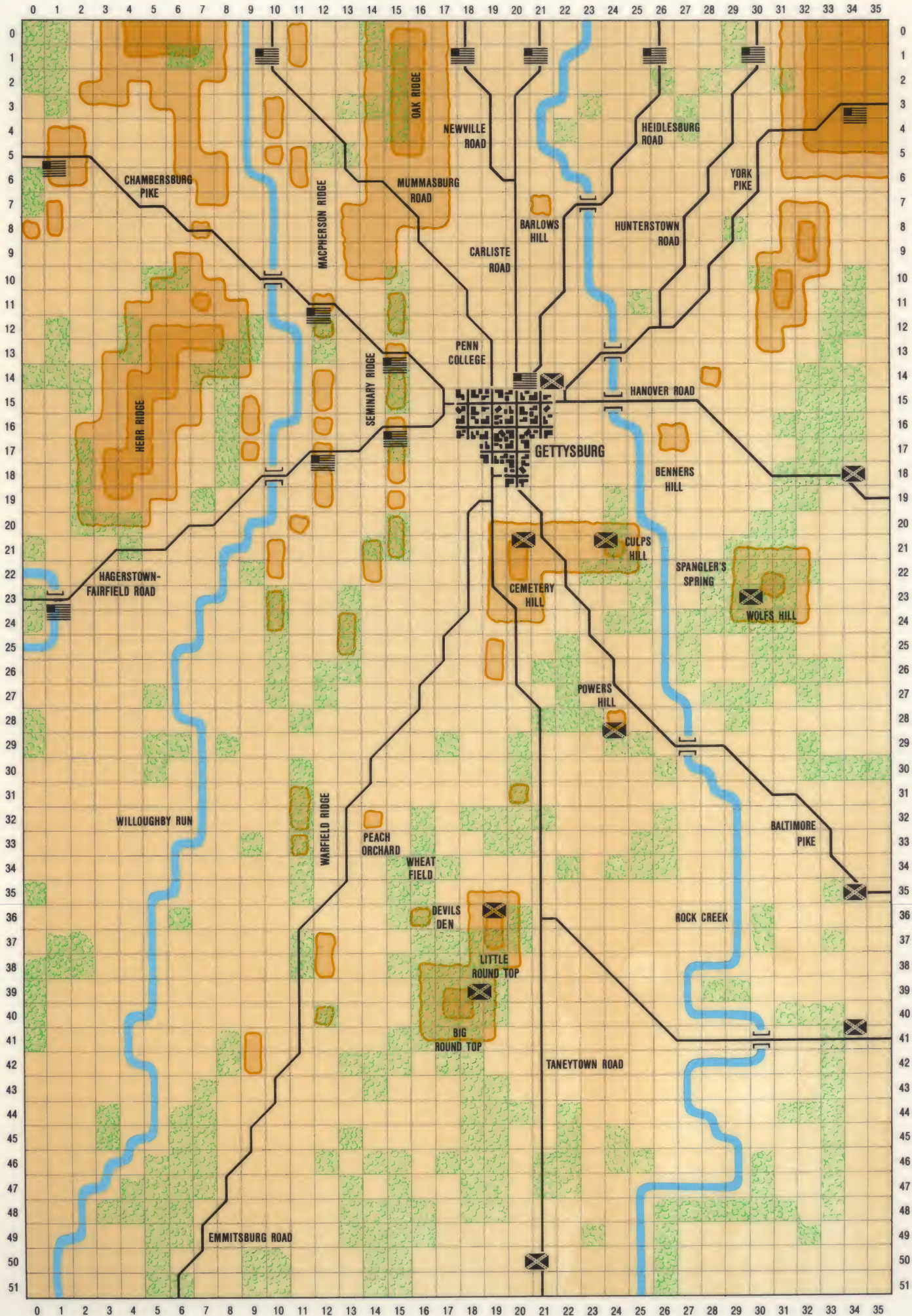


- Road
- Creek
- Bridge
- Ridge
- Woods
- Elevation 1
- Elevation 2
- Elevation 3

GETTYSBURG THE TURNING POINT



OPERATION COSTS TABLE

(Numbers in parentheses refer to diagonal moves — directions 2, 4, 6, and 8. Ignore the numbers and letters printed in green for the BASIC game. P = Prohibited.)

TERRAIN	INF/ DIS. CAV.	CAV.	LIMB. ART.	UNLIMB. ART.
Clear	2(3)	1(2)	2(3)	P
Town	6(9)	3(5)	3(5)	P
Woods	5(7)	3(5)	10(15)	P
Stream	3(5)	2(3)	3(5)	P
Bridge (1)	2(3)	1(2)	2(3)	P
Road bonus (2)	1(P)	1(P)	1(P)	P
Enter higher elevation (3)	+2	+1	+3	P
Melee: Att. (4)	2	2	P	P
Change mode to column/ mounted/ limbered (5)	2	2	N/A	2
Change mode to normal/ dismounted/ unlimbered (5)	4	4	4	N/A
Move ZOC to ZOC (6)	+8	+5	+8	P
Enter or leave enemy ZOC	+2	+1	+3	P
Fortify	8	8	P	8
Fire phase	2	2	P	4
Melee: Def.	1	1	2	2

Notes:

- Units using the road bonus pay only 1 operation point to enter.
- Diagonal moves are not allowed using the road bonus. *To use the road bonus, infantry must be in column mode and artillery must be in limbered mode.*
- Units using the road bonus pay only 1 operation point to enter a higher elevation.
- A unit must fire at the square it is to melee.
- Mode change for CAV ART is 2 to limber and unlimber. All units add 2 to change mode in enemy ZOC.*
- You must move onto a friendly unit.

FATIGUE TABLE

ACTION	COST
Movement into another square	Random of 0 or 1 dependent proportionally on effectiveness
Fortify one level	20
Lose 2 casualties	1
Per Force March	6
Leader dies in unit	5
Routed unit passes through	5
Infantry or Cavalry fire	2
Artillery fire	4

NOTE: units with over 600 men in them will gain proportionately less fatigue up to 1000 men. For example, a 600-man unit gains 1 fatigue point per 2 losses (50% of casualties turn into fatigue). A 900-man unit would gain 1 fatigue per 3 men lost (33%).

FIRE AND MELEE STRENGTH MODIFIERS

TARGET LOCATION	FIRE MOD.	MELEE MOD.
Clear	1.00	1.00
Woods	0.80	1.00
Higher Elevation	0.80	0.80
Town	0.80	0.80
Bridge/Stream	1.00	1.00
FIRING UNITS LOCATION	FIRE MOD.	MELEE MOD.
Bridge/Stream	1.00	0.80
All Others	1.00	1.00
SPECIAL CONDITIONS	FIRE MOD.	MELEE MOD.
Target Dismounted with Carbines	0.80	1.00
Firing Unit Has <6 O.P.	0.75	1.00
Target Unit is Flanked	1.20*	1.20***
Firing Unit is Disrupted	0.30**	0.30
Firing Artillery Adjacent to Target (both in woods)	0.10	1.00
Firing Unit Out of Ammo	0.30**	0.70
MODES	FIRE MOD.	MELEE MOD.
Normal	1.00	1.00
Column	0.50	0.50
Mounted	0.60	1.50
Routed	0.50**	0.50****
Unlimbered	1.00	1.00
Limbered	0.10**	0.50****
Dismounted	0.75	1.00

* During Final Defensive Fire, the modifier is 0.5 for the flanked unit firing.

** May only fire during Final Defensive Fire and with these modifiers.

*** The flanked defender in Melee and Final Defensive Fire has a modifier of 0.5. The flanker has a modifier of 1.2.

**** May only defend in Melee and with this modifier.

WEAPON/RANGE CASUALTY TABLE

WEAPON TYPE	ABREV.	RANGE IN SQUARES						
		1	2	3	4-6	7-10		
Rifle	RFL	6	3	0	0	0		
Musket	MSK	4	0	0	0	0		
Rifle/Musket	R/M	5	2	0	0	0		
Carbine	CRB	12	3	0	0	0		
Shotgun	SHG	6	0	0	0	0		
Pistol	PST	2	0	0	0	0		
12 lb. Napoleon	N12	14	4	2	1	0		
3" Rifled Gun	RG3	8	5	4	2	1		
3" RG/12# N	R/N	11	4	3	1	0		
10 lb. Parrott/12# N	P/N	11	4	3	2	1		
10 lb. Parrott	P10	8	5	5	2	2		
3" RG/10 lb. Parrott	R/P	8	5	4	2	1		

The number under the range column is the number of men lost per 100 men for small arms fire and per one gun for artillery. These numbers are further modified by the various strength/casualty modifiers.

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ADDITIONAL MODIFIERS FOR FIRE AND MELEE

Leader Bonus: Direct Modifier. A leader with bonus of 20 would give a modifier of 1.2.

Density: 1% more casualties per 12 men when more than 650 men are in the square. 1% less casualties when less than 650 men.

Fortification Level: The firing unit is modified by 10% per level that the target is fortified. A level of 5 would give a modifier of 0.5.

Effectiveness: Direct Modifier. An effectiveness of 55 would give a 0.55 modifier.

Fatigue: Direct Modifier. Fatigue of 20 would give a modifier of 0.8.

Command Control: Direct Modifier.

A rating of 1.1 would give a modifier of 1.1.

Visibility: Direct Modifier. Visibility of 60% would give a modifier of 0.6.

Artillery Men: Each gun is assumed to have 16 artillery men to support it. When artillery fires, it receives a proportionate modifier based on the number of men it needs to fully support a gun. A Union artillery unit with six guns would need 96 men to function fully. If it lost 19 men, the unit would receive a modifier of 0.8.

Random Modifier: Modifier of 0.9 to 1.1 determined randomly.

All modifiers are cumulative as shown in the example below:

A firing unit with the conditions below would receive the indicated modifiers (all modifiers are multiplied together):

- Firer has less than 6 O.P.	= 0.75
- Target in woods	= 0.80
- Target on higher elevation	= 0.80
- Firer in column mode	= 0.50
- Target has carbines	= 0.80
- Firer has 75 effectiveness	= 0.75
- Firer has 15 fatigue	= 0.85
- Firer has leader bonus of 15	= 1.15
- Firer has command control of 1.3	= 1.30
- Random modifier is 1.0	= 1.00
TOTAL	0.18

A unit above with 1000 men would fire with a strength of 180. (With rifles at range one, it would kill 10 men.)

MELEE RESULTS

The attacker's modified strength is divided by the defender's modified strength to determine the odds which govern the losses sustained and retreats in melee. The odds of 2 to 1 are considered the break-even point. The defender or attacker (not both) may retreat according to the chart below. The defender is checked first and then the attacker (provided the defender does not retreat).

ODDS	% CHANCE ATTACKER RETREAT	% CHANCE DEFENDER RETREAT
<0.3	60	10
0.3 to 0.49	50	20
0.5 to 0.99	40	30
1.0 to 1.99	30	40
2.0 to 2.99	20	50
3.0 to 3.99	0	60
4.0 to 4.99	0	70
5+	0	80